

ABSTRACT

The invention is a device that allows the manipulation of both the temperature and the humidity of air through the temperature control of two fluid volumes, one of which must be water. Air may be pumped or forced through a volume of water to humidify it. That same air may then be passed over a collection of tubing with a high thermal conductivity containing a cold fluid to chill the air and allow condensation to occur. By this method, air will be dehumidified. Dehumidification can be augmented by the addition of a valve to effect pressurization within the device. The air is then passed through a system of pipes that run through the volume of water responsible for humidification to give the air its final temperature. The heating of the two volumes of water can be done through the same means as air is heated in the place of installation.